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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BRIGGS, NATHANAEL R

ART UNIT PAPER NUMBER

2871

DATE MAILED: 10/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/733,305

Applicant(s)

CHOI ET AL.

Examiner

Nathanael Briggs

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 14-19 is/are pending in the application.
- 4a) Of the above claim(s) 9-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 14-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/7/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 9-13 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on September 8, 2006.

Claim Objections

2. Claims 3 and 7 are objected to because of the following informalities: Claims 3 recites the word "substanitially" which should read "substantially". Further, claim 7 recites the words "phase-transiting" and "isotrpic", which should be spelled "phase-transitioning" and "isotropic", respectively. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4-6, 8, and 14-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Takato et al. (US 6,445,434).

5. Regarding claim 1, Takato discloses an aligning method of a ferroelectric LCD (referred to hereafter as "FLCD"; see figures 2 and 17, for instance) having steps of disposing a first mask and a second mask (131; column 6, lines 32-48), each of which has opening regions (a) and blocking regions (b) arranged in alternating fashion in the vertical and horizontal direction corresponding to liquid crystal cells of the LCD (column 6, lines 11-16); and injecting a ferroelectric liquid crystal (referred to hereafter as "FLC") material within the liquid crystal panel (column 10, lines 6-9). Claim 1 is therefore unpatentable.

6. Regarding claim 4, Takato discloses the aligning method of claim 1 (see figures 1, 2, and 17, for instance) further having steps of arranging the first mask (131) having opening regions on a first alignment film (14) formed on an upper plate (12) of the LCD; photo-exposing the first alignment film (14) of the upper plate (12) with an ultraviolet ray (column 14, lines 1-6) through the first mask (131); arranging the second mask (131) having opening regions on a second alignment film (13) formed on a lower plate (11) of the LCD; and photo-exposing (column 10, lines 7-15) the second alignment film (13) of the lower plate (11) through the second mask (131). Claim 4 is therefore unpatentable.

7. Regarding claim 5, Takato discloses the aligning method of claim 4 (see figures 1, 2, and 17, for instance), wherein each of the openings (a, b) is substantially the same size as the liquid crystal cell. Claim 5 is therefore unpatentable.

8. Regarding claim 6, Takato discloses the aligning method of claim 1 (see figures 1, 2, and 17, for instance), wherein the opening and blocking regions (a, b) in the first (131) and second (131) masks are arranged in an alternating fashion (column 6, lines 4-10). Claim 6 is therefore unpatentable.

9. Regarding claim 8, Takato discloses an aligning method of an FLC (see figures 1, 2, and 17, for instance) having steps of aligning an upper plate (12) of an LCD by using a first mask (131) having a first plurality of opening regions (a) patterned thereon (column 6, lines 31-47); aligning a lower plate of (11) the LCD by using a second mask (131) having a second plurality of opening (a) regions patterned thereon (column 6, lines 31-47); and assembling the upper plate (12) and the lower plates (11) of the LCD; and injecting a ferroelectric liquid crystal material (column 10, lines 6-9) between the assembled upper (12) and lower (11) plates of the LCD. Claim 8 is therefore unpatentable.

10. Regarding claims 14-15, Takato discloses the aligning method according to claim 1 (see figures 1, 2, and 17, for instance), wherein the LCD has first regions (a) corresponding to the opening regions (a) of the first mask (131) and second regions (b) corresponding to the opening regions (b) of the second mask (131), the first regions (a) and the second regions (b) are respectively aligned in different directions (column 6, lines 32-39). Claims 14-15 are therefore unpatentable.

11. Regarding claims 16-17, Takato discloses the aligning method of claim 1 (see figures 1, 2, and 17, for instance), wherein the first regions (a) and the second regions (b) are alternately arranged in a vertical direction and horizontal direction of the LCD. Claims 16-17 are therefore unpatentable.

12. Regarding claims 18-19, Takato discloses the aligning method of claim 1 (see figures 1, 2, and 17, for instance), wherein the first regions (a) and the second regions (b) are substantially the same size as a liquid crystal cell of the LCD. Claims 18-19 are therefore unpatentable.

13. Claims 2-3 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishii (US 6,133,974).

14. Regarding claim 2, Ishii discloses the aligning method of claim 1 (see figures 13 and 19, for instance) having steps of arranging the first mask (10) having opening regions patterned on a first alignment film (4) formed on an upper plate (2) of the LCD; rubbing (column 39, lines 34-41) the first alignment film (4) of the upper plate (2) through the first mask (10); arranging the second mask (10) having opening regions on a second alignment film (4) formed on a lower plate (2) of the LCD; and rubbing (column 39, lines 34-41) the second alignment film (4) of the lower plate (2) in the same direction (12c) as the rubbing direction (12d) of the alignment film (4) of the upper plate (2) through the second mask (10). Claim 2 is therefore unpatentable.

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15. Regarding claim 3, Ishii discloses the aligning method of claim 2 (see figures 13 and 19, for instance), wherein each of the openings (10) is substantially the same size as a liquid crystal cell. Claim 3 is therefore unpatentable.

16. Regarding claim 7, Ishii discloses the aligning method of claim 2 (see figures 13 and 19, for instance), further having steps of phase-transitioning the FLC material within the LCD from isotropic to nematic phase by lowering temperature of the LCD (column 39, lines 44-51); and phase-transitioning the FLC material within the LCD from a nematic phase to a smectic C phase by further lowering the temperature of the LCD (column 3, lines 41-50; column 39, lines 60-62). Claim 7 is therefore unpatentable.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathanael Briggs whose telephone number is (571) 272-8992. The examiner can normally be reached on 8:30 AM to 5:00 PM (EST) Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathanael Briggs
10/18/2006


ANDREW SCHECHTER
PRIMARY EXAMINER